

RESEARCH DEPARTMENT

REIGATE U.H.F. RELAY STATION : SUMMARY OF INSTALLATION

Technological Report No. RA-3/3
UDC 621.396.712 1967/20

On 11.12.67 the following work was carried out:
1. The relay station was checked and found to be in good working order.
2. The relay station was checked and found to be in good working order.
3. The relay station was checked and found to be in good working order.
4. The relay station was checked and found to be in good working order.
5. The relay station was checked and found to be in good working order.

H. Page

for Head of Research Department

G.H. Millard, B.Sc., A.Inst.P.

This Report uses SI units in accordance with B.S. document FD 3886.

U.H.F. RELAY STATIONS : SUMMARY OF INSTALLATION

NAME: 101.3 REIGATE

TYPE: 1

TRANSMISSIONS COMMENCED: — (TRADE) 24.10.66 (SERVICE)

SITE DATA

LOCATION: Reigate Hill

GRID REFERENCE: TQ 257521

HEIGHT, a.o.d. : 232 m (760 ft)

SUPPORT MAST

TYPE 46 m (150 ft) tower and topmast

OVERALL HEIGHT 56 m (185 ft)

FREQUENCIES

BAND: V

CHANNELS: 53, 57 (BBC-1)
60, 63 (BBC-2)

RECEPTION

PARENT: Crystal Palace

CHANNELS: 23, 26 (BBC-1)
30, 33 (BBC-2)

POLARIZATION: Horizontal

AERIALS: 2 x 4λ troughs

AERIAL HEIGHTS: 29 m (95 ft) a.g.l.
32 m (105 ft) a.g.l.

TRANSMITTERS

TYPE: Racal, klystron, 1 kW

OPERATING POWER: (1) 0.13 kW
(2) 0.7 kW

FEEDERS

TRANSMITTING: HF 1⁵/₈ in. -50 ohm

RECEIVING: RPC 2603A -50 ohm

TRANSMITTING AERIAL

TYPE: Standard cardioid

RADIATION CHARACTERISTICS

POLARIZATION: Vertical

MEAN E.R.P. : (1) 1.4 kW
(2) 5.6 kW

RADIATING LENGTH: 16λ

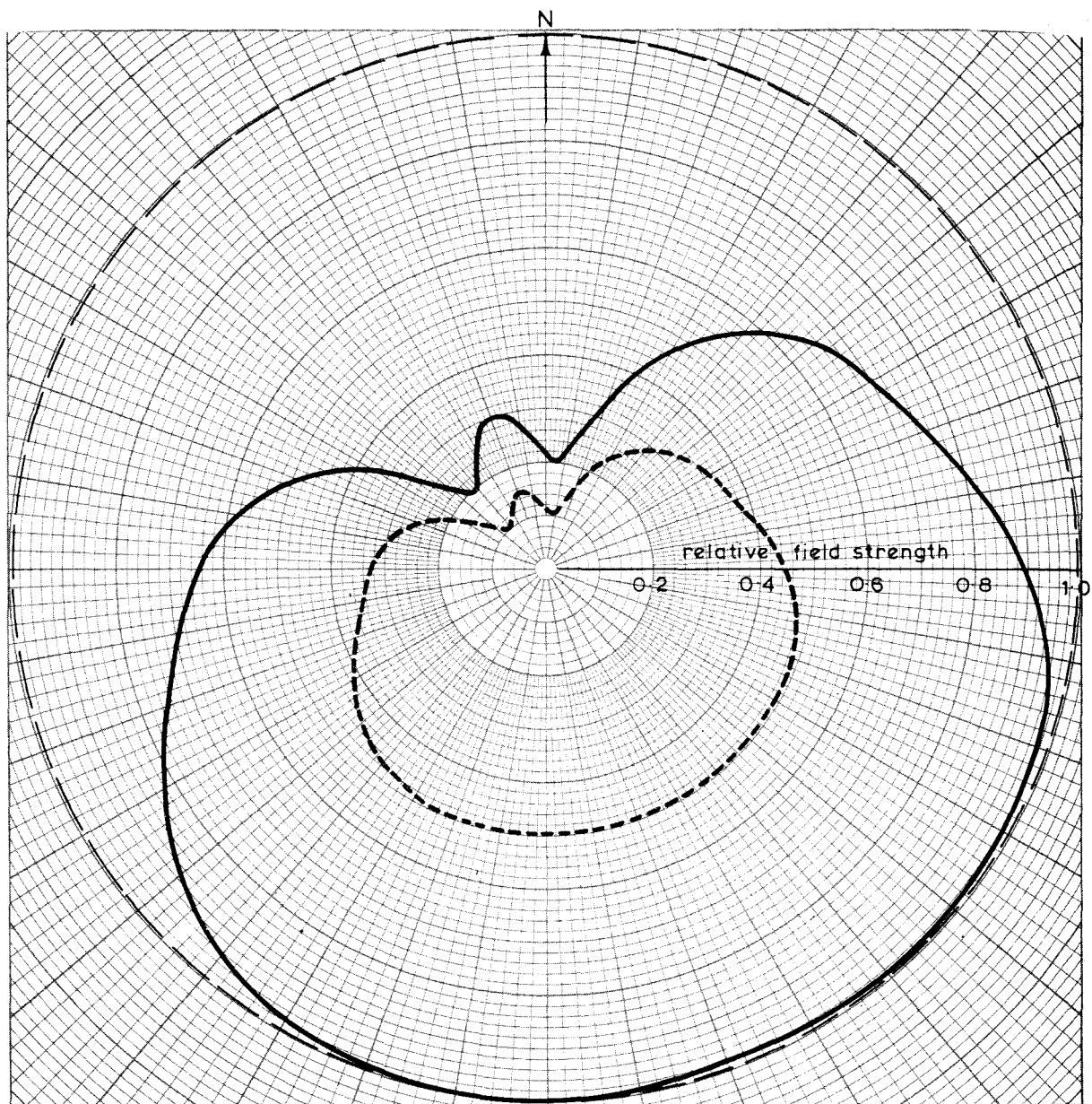
H.R.P. : Fig. 1

V.R.P. : Fig. 2

MAXIMUM E.R.P. : (1) 2.5 kW
(2) 10 kW

MEAN HEIGHT: 50.6 m (166 ft) a.g.l.

NOTES: (1) Initial power
(2) Power increase when co-channel station 117 Oxford comes into service.

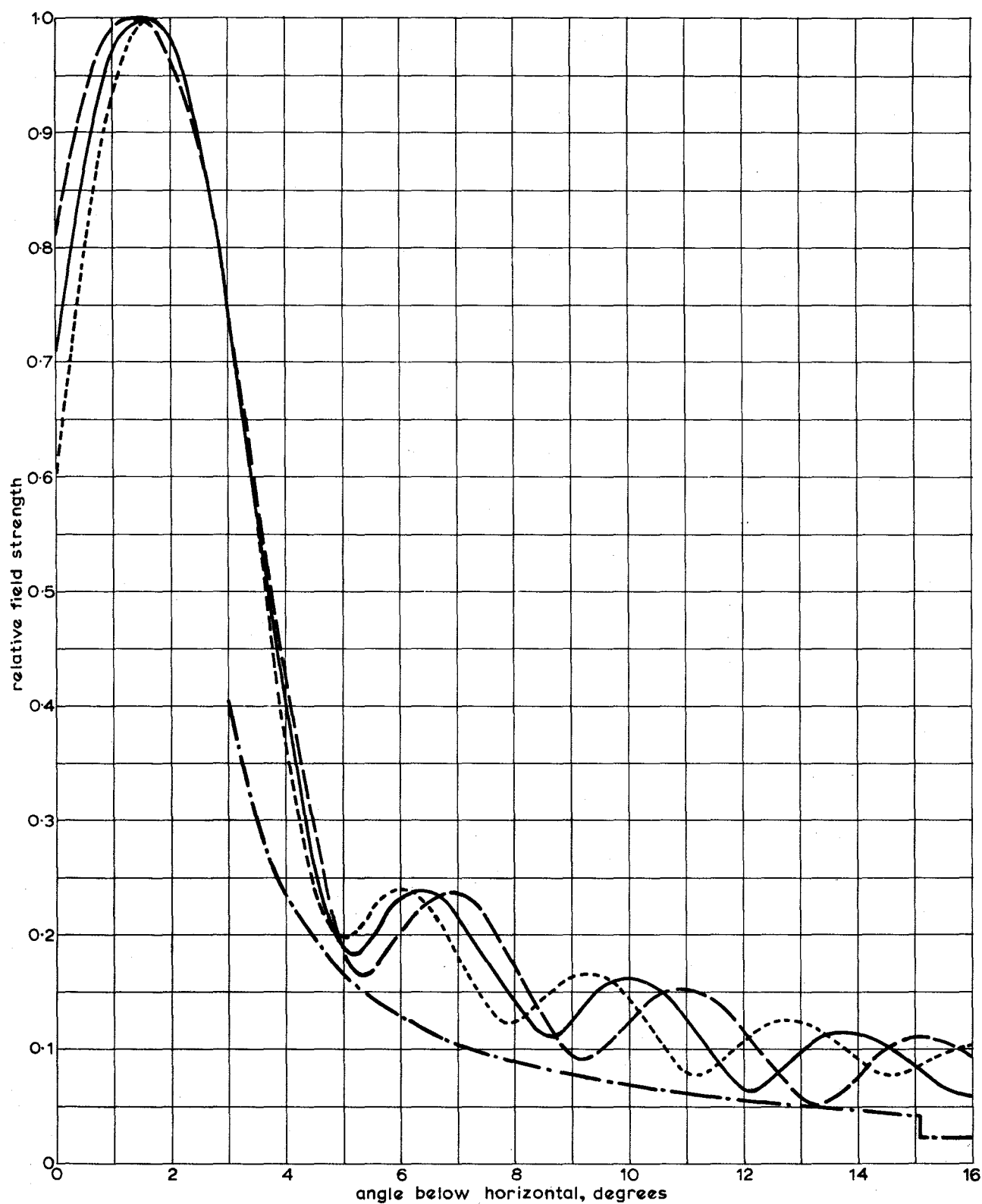


REIGATE

Fig.1. Horizontal radiation pattern
VERTICAL POLARIZATION

- Transmitter power: 0.18 kW
Mean E.R.P.: 1.4 kW
- Transmitter power: 0.7 kW
Mean E.R.P.: 5.6 kW
- Stockholm E.R.P. limit

Unit field corresponds to an E.R.P. of 10kW



REIGATE

Fig. 2. Vertical radiation pattern

— — — 710 MHz
 — — — 790 MHz
 - - - - - 870 MHz

- . - . - Specified minimum field